

SEQUENCE LISTING

(1) GENERAL INFORMATION:

(i) APPLICANT: Olsson, Lennart
Naranda, Tatjana

5 (ii) TITLE OF INVENTION: Receptor Derived Peptides As Modulators
Of Receptor Activity

(iii) NUMBER OF SEQUENCES: 44

(iv) CORRESPONDENCE ADDRESS:

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(v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Floppy disk
(B) COMPUTER: IBM PC compatible
(C) OPERATING SYSTEM: PC-DOS/MS-DOS
20 (D) SOFTWARE: PatentIn Release #1.0, Version #1.30

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: US 08/
(B) FILING DATE:
(C) CLASSIFICATION:

25 (vii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER: US 08/788,820
(B) FILING DATE: 23-JAN-1997

(vii) PRIOR APPLICATION DATA:

30 (A) APPLICATION NUMBER: US 08/701,382
(B) FILING DATE: 22-AUG-1996

(vii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER: US 08/612,999
(B) FILING DATE: 08-MAR-1996

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(ix) TELECOMMUNICATION INFORMATION:

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(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 23 amino acids
(B) TYPE: amino acid

(ii) MOLECULE TYPE: protein

5 Glu Arg Glu Thr Gln Ile Ala Lys Gly Asn Glu Gln Ser Phe Arg Val
 1 5 10 15

 Asp Leu Arg Thr Leu Leu Arg
 20

10 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 23 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: unknown
 (D) TOPOLOGY: unknown

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

(2) INFORMATION FOR SEQ ID NO:3:

(ii) MOLECULE TYPE: protein

30 Lys Thr Asp Ser Gln Ile Leu Lys Glu Leu Glu Glu Ser Ser Phe Arg
1 . • 5 10 15

Lys Thr Phe Glu Asp Tyr Leu His
20

35 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 25 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: unknown
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

Glu Ala Glu Ala Ala Val Ala Thr Gln Glu Thr Ser Thr Val Arg Leu
1 5 10 15
5 Lys Val Ser Ser Thr Ala Val Arg Thr
20 25

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 24 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: unknown
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

Lys Thr Glu Ala Glu Lys Gln Ala Glu Lys Glu Glu Ala Glu Tyr Arg
1 5 10 15
Lys Val Phe Glu Asn Phe Leu His
20

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 23 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: unknown
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

Lys Lys Glu Asn Lys Ile Val Pro Ser Lys Glu Ile Val Trp Trp Met
1 5 10 15
Asn Leu Ala Glu Lys Ile Pro
20

(2) INFORMATION FOR SEQ ID NO:7:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: unknown
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

Glu Lys Lys Pro Val Pro Trp Glu Ser His Asn Ser Ser Glu Thr Cys
1 5 10 15

5 Gly Leu Pro Thr Leu Val Gln Thr Tyr 20 25

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 23 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: unknown
- (D) TOPOLOGY: unknown

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

Gly Pro His Cys Val Lys Thr Cys Pro Ala Gly Val Met Gly Glu Asn
15 1 5 10 15

Asn Thr Leu Val Trp Lys Tyr
20

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 28 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: unknown
- (D) TOPOLOGY: unknown

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

Glu Tyr Glu Leu Gln Tyr Lys Glu Val Asn Glu Thr Lys Trp Lys Met
1 5 10 15

Met Asp Pro Ile Leu Thr Thr Ser Val Pro Val Tyr
20 25

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 23 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: unknown
- (D) TOPOLOGY: unknown

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

Ala Arg Gly Gly Thr Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu

Gln Leu Arg Ala Arg Leu Asn
20

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 23 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: unknown
- (D) TOPOLOGY: unknown

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

Leu Arg Gly Arg Thr Arg Tyr
20

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 24 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: unknown
- (D) TOPOLOGY: unknown

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

His Cys Arg Glu Pro Pro Pro Trp
20

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: unknown
- (D) TOPOLOGY: unknown

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

Pro Leu Gln Pro Leu

20

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 22 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: unknown
- (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

Gln Glu Glu Gly Ala Asn Thr Arg Ala Trp Arg Thr Ser Leu Leu Ile
 1 5 10 15
 Ala Leu Gly Thr Leu Leu
 20

(2) INFORMATION FOR SEQ ID NO:15:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 28 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: unknown
- (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

Glu Pro Ser Leu Arg Ile Ala Ala Ser Thr Leu Lys Ser Gln Ile Ser
 1 5 10 15
 Tyr Arg Ala Arg Val Arg Ala Trp Ala Gln Cys Tyr
 20 25

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 28 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: unknown
- (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

Asp Tyr Glu Thr Arg Ile Thr Glu Ser Lys Cys Val Thr Ile Leu His
 1 5 10 15
 Lys Gly Phe Ser Ala Ser Val Arg Thr Ile Leu Gln
 20 25

(2) INFORMATION FOR SEQ ID NO:17:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 20 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: unknown
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

Pro Ala Gln Glu Val Ala Arg Gly Val Leu Thr Ser Leu Pro Gly Asp
 1 5 10 15
 Ser Val Thr Leu
 20

(2) INFORMATION FOR SEQ ID NO:18:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 26 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: unknown
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

Gly Lys Ser Asn Ile Cys Val Lys Val Gly Glu Lys Ser Leu Thr Cys
 1 5 10 15
 Lys Lys Ile Asp Leu Thr Thr Ile Val Lys
 20 25

(2) INFORMATION FOR SEQ ID NO:19:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 21 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: unknown
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

Glu Asp Met Gly Asn Asn Thr Ala Asn Trp Arg Met Leu Leu Arg Ile
 1 5 10 15
 Leu Pro Gln Ser Phe
 20

(2) INFORMATION FOR SEQ ID NO:20:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 21 amino acids

(ii) MOLECULE TYPE: protein

Glu Val Leu Gly Asn Asp Thr Ala Lys Trp Arg Met Val Leu Arg Ile
1 5 10 15
Leu Pro His Thr Phe
20

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: unknown
- (D) TOPOLOGY: unknown

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 22 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: unknown

(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

[illegible]

(2) INFORMATION FOR SEQ ID NO:23:

35 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 30 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: unknown
- (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

Glu Gln Pro Thr Gln Leu Glu Leu Pro Glu Gly Cys Gln Gly Leu Ala
1 5 10 15
5 Pro Gly Thr Glu Val Thr Tyr Arg Leu Gln Leu His Met Leu
20 25 30

(2) INFORMATION FOR SEQ ID NO:24:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 22 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: unknown
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

Glu Trp Ser Asp Lys Gln Cys Trp Glu Gly Glu Asp Leu Ser Lys Lys
1 5 10 15
Thr Leu Leu Arg Phe Trp
20

(2) INFORMATION FOR SEQ ID NO:25:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 22 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: unknown
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

Lys Gln Asp Lys Lys Ile Ala Pro Glu Thr Arg Arg Ser Ile Glu Val
1 5 10 15
Pro Leu Asn Glu Arg Ile
20

(2) INFORMATION FOR SEQ ID NO:26:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 34 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: unknown
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

Asp Pro Asn Ile Thr Val Glu Thr Leu Glu Ala His Gln Leu Arg Val
1 5 10 15

Ser Phe Thr Leu Trp Asn Glu Ser Thr His Tyr Gln Ile Leu Leu Thr
20 25 30

5 Ser Phe

(2) INFORMATION FOR SEQ ID NO:27:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: unknown
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

Glu Ile Thr Thr Asp Val Glu Lys Ile Gln Glu Ile Arg Tyr Arg Ser
1 5 10 15

Lys Leu Lys Leu Ile
20

(2) INFORMATION FOR SEQ ID NO:28:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 22 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: unknown
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

Glu Ala Arg Cys Asp Phe Cys Ser Asn Asn Glu Glu Ser Phe Ile Leu
1 5 10 15

Asp Ala Asp Ser Asn Met
20

(2) INFORMATION FOR SEQ ID NO:29:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 22 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: unknown
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

Ser Gln Glu Gly Asn Thr Met Lys Thr Asn Asp Thr Tyr Met Lys Phe
1 5 10 15

Ile Val Arg His
35

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: unknown
- (D) TOPOLOGY: unknown

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

Arg Met Leu Phe
20

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: unknown
- (D) TOPOLOGY: unknown

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

Arg Val Glu Tyr His Phe Leu Ser Pro Tyr
20 25

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: unknown
- (D) TOPOLOGY: unknown

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

Glu Trp Glu Ile His Phe Ala Gly Gln Gln Thr Glu Phe Lys Ile Leu
1 5 10 15

Ser Leu His Pro Gly Gln Lys Tyr Leu
20 25

(2) INFORMATION FOR SEQ ID NO:36:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 27 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: unknown
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

Pro Lys Thr Asp Ser Gln Ile Leu Lys Glu Leu Glu Glu Ser Ser Phe
1 5 10 15

Arg Lys Thr Phe Glu Asp Tyr Leu His Asn Val
5 20 25

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 36 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: unknown
- (D) TOPOLOGY: unknown

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:

Gly Asn Glu Gln Ser Phe Arg Val Asp Leu Arg Thr Leu Leu Arg Tyr
15 1 5 10 15

Ala Gly Gly Gly Asn Glu Gln Ser Phe Arg Val Asp Leu Arg Thr Leu
20 25 30

Leu Arg Tyr Ala
35

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: unknown
- (D) TOPOLOGY: unknown

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:

Ala Arg Arg Lys Ala Lys Ala Glu Arg Lys Leu Arg Leu Arg Pro Ser
1 5 10 15

30 Asp Leu Arg Ser Phe Leu Thr Met Phe
 20 25

(i) **SEQUENCE CHARACTERISTICS:**

- (A) **LENGTH:** 27 amino acids
- (B) **TYPE:** amino acid
- (C) **STRANDEDNESS:** unknown
- (D) **TOPOLOGY:** unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:

Lys Leu Arg Thr Gln Glu Thr Arg Gly Asn Glu Val Ser His Tyr Lys
1 5 10 15
Arg Leu Ala Arg Ser Thr Leu Leu Leu Ile Pro
5 20 25

(2) INFORMATION FOR SEQ ID NO:40:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: unknown
- (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:

Gly Lys Tyr Val Cys Leu Glu Asp Phe Pro Glu Asp Lys Arg Phe Leu
1 5 10 15
Ser Tyr Thr Thr Leu Leu Phe Ile Leu
20 25

(2) INFORMATION FOR SEQ ID NO:41:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 11 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: unknown
- (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:

Ser Phe Arg Val Asp Ser Glu Phe Arg Tyr Thr
1 5 10

(2) INFORMATION FOR SEQ ID NO:42:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: unknown
- (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:

Cys Leu Asn Pro Met Leu Tyr Thr Phe Ala Gly Val Lys Phe Arg Ser
1 5 10 15

Asp Leu Ser Arg Leu Leu Thr Lys Leu
20 25

(2) INFORMATION FOR SEQ ID NO:43:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: unknown
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:43:

Cys Leu Asn Pro Met Leu Tyr Thr Phe Ala Gly Val Lys Arg Phe Ser
1 5 10 15

Asp Leu Ser Arg Leu Leu Thr Lys Leu
20 25

(2) INFORMATION FOR SEQ ID NO:44:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: unknown
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:

Cys Leu Asn Pro Met Leu Tyr Thr Phe Ala Gly Val Lys Arg Phe Ser
1 5 10 15

Asp Leu Ser Arg Leu Leu Thr Lys Leu
20 25